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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,720	04/07/2001	Richard LaPeruta JR.	PU000162	7788

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EXAMINER

PHINNEY, JASON R

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 08/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/827,720

Applicant(s)

LAPERUTA ET AL.

Examiner

Jason Phinney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The Amendment, filed on 6/23/03, has been entered and acknowledged by the Examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 5,406,168 to Takagi.

Regarding Claim 1, Takagi discloses a tension mask assembly for a cathode ray tube and disposed between an electron gun and the screen that includes a mask frame (Figure 1A, #111) with a pair of frame members (#'s 101 and 102) disposed at opposite ends of the mask frame. Takagi further discloses that there is a plurality of mask strands (#105 and Figure 4, #305) disposed between and affixed to the frame members in such a way as to produce tension in the mask strands (Column 2, Lines 34-35). Takagi finally discloses that there is a third member (Figure 4, #309) disposed in a region of the strands intermediate of the two frame members and wherein the third member extends from an electron gun facing side toward the screen to contact a first intermediate region of the mask strands.

Regarding Claim 2 Takagi further discloses that the third (Figure 1A, #109) member should be disposed in a direction parallel to the frame members and should be offset such that the third is closer to one frame member than the other frame member (See Figure 1A and embodiment of Figure 4).

Regarding Claim 3 Takagi further discloses that there should be a fourth (Figure 1A, #110) member disposed in a second intermediate region of the mask strands and in between the frame members (See Figure 1A and embodiment of Figure 4).

Regarding Claim 4, etching is a method of manufacture, since this claim is directed to the tension mask assembly the method of manufacture is not germane to the issue of patentability (See MPEP 2113). Takagi discloses the structure of the mask strands (see Figure 1A, #105 which discloses the structure of the mask strands).

Regarding Claim 5, Takagi discloses that the mask strands are connected to each other with an unetched strand material on each end (see Figure 1A, edges of mask #107 are continuous and of the same strand material therefore meet the limitations of the claim).

Regarding Claim 6, Takagi discloses that the third member is disposed perpendicularly to the mask strands (Figure 4, #309).

Regarding Claim 8, Takagi discloses that the third and fourth members apply a frictional force to the mask strands (See Figure 1A, #'s 109 and 110 and embodiment of Figure 4).

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,406,168 to Takagi in view of U.S. Patent No. 5,613,889 to Nosker.

Takagi discloses the tension mask assembly of Claim 1 as described above.

Takagi does not exemplify that a second pair of frame members should be affixed to the first pair of frame members to form a mask frame having a rectangular shape.

Nosker, in an alternate tension mask, teaches that a second pair of frame members may be affixed to the first to form a rectangular shaped mask frame (see Figure 4). This design allows for easier handling of the frame during construction while still allowing tension to be applied to the mask.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the rectangular shape derived from the additional frame members of Nosker with the tension mask assembly of Takagi in order to facilitate the production of the tension mask assembly.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,406,168 to Takagi in view of U.S. Patent No. 5,111,106 to Kaplan.

Takagi discloses the tension mask assembly of Claim 1 as described above.

Takagi does not exemplify that the third member should be attached to the mask strands by an adhesive.

Kaplan in an alternate tension mask teaches that the third member (Figure 4b, #96) is attached to the mask strands (#89) by an adhesive (#104), in this case welding, in order to prevent unnecessary movement of the strands.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the adhesion of the strands to the third member as taught by Kaplan with the tension mask of Takagi to prevent unnecessary movement of the mask strands.

6. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,406,168 to Takagi in view of U.S. Patent No. 6,111,349 to Kuwana.

Regarding Claim 10, Takagi discloses a method for forming a tension mask assembly in a cathode ray tube having a screen and an electron gun that includes providing a tension mask with a plurality of mask strands (Figure 1A, #105 and Figure 4, #305) disposed vertically between two end regions (Figure 1A, #'s 101 and 102 and Figure 4, #301), placing the mask strands in contact with a plurality of barrier ridge elements (Figure 1A, #'s 109 and 110 and see embodiment of Figure 4, #309) wherein the mask strands are not affixed to the plurality of barrier ridge elements and affixing the tension mask (See Figure 1A) to a mask frame having vertical and horizontal elements (Figure 4, #'s 301 and 301a) and wherein the barrier ridge elements (Figure 4, #309) extend from an electron gun facing side to contact the tension mask. Takagi fails to exemplify that the plurality of mask strands should be formed by etching.

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Kuwana, in an alternate tension mask, teaches that etching can be used to form a plurality of mask strands from a single thin sheet of metal (Column 2, Lines 7-10).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the etched mask strands of Kuwana with the method of Takagi in order to form the mask strands from a single thin sheet of metal.

Regarding Claim 11 Takagi further discloses that the barrier ridge elements should be aligned perpendicular to the mask strands (Figure 4, #'s 309 and 305 respectively).

Regarding Claim 12 Takagi further discloses that the barrier ridges (Figure 4, #309 and Figure 1A, #'s 109 and 110) are aligned parallel to the mask frame members (Figure 4, # 301 and Figure 1A, #'s 101 and 102) and that both of these elements are aligned perpendicular to the mask strands (Figure 1A, # 105; also Figure 4, # 305).

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,406,168 to Takagi in view of U.S. Patent No. 6,111,349 to Kuwana as applied to claim 10 above, and further in view of U.S. Patent No. 4,857,027 to Makita.

Takagi in view of Kuwana teaches the method for forming a tension mask assembly of Claim 10 as described above.

Neither Takagi nor Kuwana exemplify that the mask strands should be trimmed flush to the outer portion of the mask frame assembly after the mask strands are affixed to the mask frame.

Makita in an alternate tension mask teaches that the mask strands should be trimmed flush to the outer portion of the mask frame assembly after the mask strands are affixed to the

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mask frame in order to make it easier to handle and position the mask strands during production and remove any unnecessary material, which allows the final dimensions of the display body surrounding the screen to be smaller (see Figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method taught by Takagi in view of Kuwana with the trimming step taught by Makita in order to minimize the size of the display body needed for a given size screen.

Response to Arguments

8. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Phinney whose telephone number is (703) 305-3999. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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JP

August 19, 2003

Joseph Williams
Joseph Williams